UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,618	05/25/2005	Andreas Bergmann	2582.020	7130

7590 10/31/2008

Kathy Smith Dias, Esq.
HESLIN ROTHENBERG FARLEY & MESITI P.C.
5 Columbia Circle
Albany, NY 12203-5160

EXAMINER	
ROONEY, NORA MAUREEN	
ART UNIT	PAPER NUMBER
1644	

MAIL DATE	DELIVERY MODE
10/31/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/516,618	BERGMANN, ANDREAS	
	Examiner	Art Unit	
	NORA M. ROONEY	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,6 and 7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,6 and 7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's response filed on 07/29/2008 is acknowledged.

2. Claims 1-2, 4 and 6-7 are pending and currently under consideration as they read on a method for diagnosis of sepsis comprising determining the amount of anti-AG_{MI} antibodies and procalcitonin in the blood of a patient.

3. In view of the amendment filed on 07/29/2008, only the following rejection is maintained.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-2, 4 and 6-7 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention for the same reasons as set forth in the Office Action mailed on 01/29/2008.

Applicant's arguments filed on 07/29/2008 have been fully considered, but are not found persuasive.

Applicant argues:

> "An application satisfies the enablement requirement if one skilled in the art, after reading the disclosure, could practice the invention claimed without undue experimentation *In re Wands, 858 F. 2d 731.* The fact that some experimentation is necessary does not preclude enablement; what is required is that the amount of experimentation "must not be unduly extensive." *Chiron Corporation v. Genentech, Inc., 363 F. 3d 1247.* Only after it has been determined that additional experimentation is required, does an analysis under the Wands factors, of whether that experimentation is undue, become applicable.
>
> Preliminarily, a patent disclosure need not enable information within the knowledge of an ordinary artisan. In the instant case, all of the methodology required for the detection of the anti- AGM1 antibodies is well known to those of skill in the biochemical art. Thus, in order to enable the claimed method, all Applicants are required to provide is a correlation between a disease state in a significant number of subjects and the presence of a reliable biomarker in a biological sample from those subjects, regardless of any structural/functional characteristics of the biomarker. Applicants have met that burden.
>
> Independent claim 1 is amended above and is focused on a method for confirming the diagnosis of sepsis in a patient in whom sepsis is suspected as the result of some clinical evaluation, comprising testing blood from the patient for the presence of anti-AGM 1 antibodies, wherein an elevated level of antibodies in comparison to healthy individuals is indicative of the presence of sepsis. Applicants respectfully submit that the claims, as amended, are enabled by the disclosure in the specification that the presence of anti-AGM1 antibodies correlates positively with sepsis.
>
> Clearly, no additional guidance is necessary and no undue experimentation is required for one of skill to practice the claimed method."

It remains the Examiner's position that the specification does not provide reasonable enablement for a method for **confirming a diagnosis of sepsis** said method comprising determining the **amount of anti-asialo-G_{MI} antibodies (anti-AG_{MI} antibodies)** in blood of a patient in whom sepsis-associated symptoms are present **wherein an elevated concentration of anti-asialo-G_{MI} antibodies in said blood compared to a healthy individual is indicative of sepsis** of claim 1; wherein **said anti-AG_{MI} antibodies of the IgG and/or IgA type** are determined of claim 2; wherein **at least one further sepsis parameter** is simultaneously determined of claim 6; wherein **at least one further parameter** is **procalcitonin** of claim 7.

The specification discloses in Figures 1-4 and on pages 25, line 20 to page 31, line 32 that serum from 20 sepsis patients were tested for the presence of antibodies which bind to A $G_{M1;}$ and 89 sepsis patients and 137 normal control patients were tested for the presence of antibodies which bind to G_{M1}. Immunoglobulin IgG and IgA subclasses were determined in the 20 sepsis patients that were tested for the presence of antibodies which bind to A G_{M1}. Although Figures 3 and 4 list control patients, the specification only discloses that control patients were measured for the presence of antibodies that bind G_{M1}, not AG_{M1}. The specification discloses on page 31 that because sepsis patients had increased AG_{M1} antibodies of the IgA and IgG subclasses, without having increased AG_{M1} IgM antibodies, then the IgA and IgG antibodies were not formed as a result of the sepsis risk event. In other words, the IgA and IgG antibodies were already present in the patients and contributed to their sepsis or the antibodies were activated in the pre-sensitized immune system. However, the specification establishes no causal link between sepsis and the antibodies.

It remains the Examiner's position that the art of Badgwell et al (PTO 892 mailed on 01/29/2008; Reference U) and Heremans et al. (PTO-892 mailed on 01/29/2008; Reference V) teach that sepsis is not causally linked to the AG_{M1} IgG and IgA antibodies.

Further, the art teaches that as anti-AG_{M1} antibodies are present in normal people after 1 month of age (PTO-892 mailed on 01/29/2008; Reference W), Graves Disease and Hashimoto's Thyroiditis patients (PTO-892 mailed on 01/29/2008, Reference X); Acute Motor Neuropathy

patients (PTO-892 mailed on 01/29/2008, Page 2, Reference U); Multiple Sclerosis and Systemic Lupus Erythematosus patients (PTO-892 mailed on 01/29/2008, Page 2, Reference V); Behcets's Disease patients (PTO-892 mailed on 01/29/2008, Page 2, Reference W); and Polyradiculoneuropathy patients (PTO-892 mailed on 01/29/2008, Page 2, Reference X). Because normal individuals and all of these patients have anti-AG_{M1} antibodies and not sepsis, then anti-AG_{M1} antibodies are not a diagnostic for sepsis. While the presence of anti-AG_{M1} antibodies might increase risk for sepsis, it does not diagnose it.

The specification has not adequately disclosed a method for the diagnosis of sepsis comprising determining "at least one further sepsis parameter" or procalcitonin. The specification has provided no evidence that procalcitonin can be used in the recited diagnostic method, much less by claiming it by name without reference to its specific sequence or specificity. A skilled artisan would be required to perform undue experimentation to practice the invention commensurate in scope with the claims.

Applicant's argument that "..all Applicants are required to provide is a correlation between a disease state in a significant number of subjects and the presence of a reliable biomarker in a biological sample from those subjects, regardless of any structural/functional characteristics of the biomarker." is unpersuasive. Applicants have not shown, nor does the art support the contention that anti-AG_{M1} antibodies are a reliable biomarker for sepsis diagnosis. A patient having sepsis symptoms may just as easily have increased anti-AG_{M1} antibodies due to Graves Disease, Multiple Sclerosis or any other disease associated with anti-AG_{M1} antibodies as

sepsis. Anti-AG_{M1} antibodies are not a reliable biomarker for sepsis, so the rejection is maintained.

6. The following rejection is necessitated by the amendment filed on 07/29/2008.

7. Claims 1-2, 4 and 6-7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This is a New Matter rejection for the following reasons:

The term "method for confirming a diagnosis" comprising determining the amount of anti-AG_{M1} antibodies in blood of a "patient in whom sepsis-associated symptoms are present" claimed in claim 1 introduced by the amendment filed on 07/28/2008 represents a departure from the specification and the claims as originally filed.

Applicant's amendment does not point to the specification for support for the newly added limitations "method for confirming a diagnosis" and "patient in whom sepsis-associated symptoms are present." The specification and the claims as originally filed do not provide clear support for a "method for confirming a diagnosis" and "patient in whom sepsis-associated symptoms are present."

8. No claim is allowed.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nora M. Rooney whose telephone number is (571) 272-9937. The examiner can normally be reached Monday through Friday from 8:30 am to 5:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen O'Hara can be reached on (571) 272-0878. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 28, 2008
Nora M. Rooney, M.S., J.D.
Patent Examiner
Technology Center 1600

/Maher M. Haddad/
Primary Examiner,
Art Unit 1644